AMENDMENTS TO THE CLAIMS

A detailed listing of all claims that are, or were, in the present application, irrespective of whether the claim(s) remains under examination in the application are presented below. The claims are presented in ascending order and each includes one status identifier. Those claims not cancelled or withdrawn but amended by the current amendment utilize the following notations for amendment: 1. deleted matter is shown by strikethrough for six or more characters and double brackets for five or less characters; and 2. added matter is shown by underlining.

1. (Original) Apparatus for reducing frequency pulling of an output VCO involving AM modulation wherein the output frequency is structured to be larger than a synthesizer VCO frequency by a factor greater than unity to maintain a non-harmonic relation between the synthesizer and the output VCO, the apparatus comprising:

a source for signals;

the synthesizer for synthesizing said signals being in communication with a first frequency divider;

a second frequency divider connected to the output VCO;

a third frequency divider connected to said second frequency divider and further connected to said synthesizer;

a mixer connected to the transmission side of the output VCO and further connected to the transmission side of said second frequency divider;

a pretransmission filter connected to said mixer on the transmission side; and

an amplifier connected to the pretransmission filter and further connected to a transmitter;

the output frequency at said amplifier being non-harmonically related to the synthesizer VCO to thereby minimize frequency pulling during the AM modulation of the output VCO.

2. (Original) The apparatus of claim 1, wherein said mixer is structured to accept about 100% of the frequency from the output VCO and further accept a frequency input equal to about 50% of the output VCO.

3. (Original) The apparatus of claim 1, wherein said third frequency divider is structured to distribute $\frac{1}{N}$x50% of the frequency from the output VCO to the phase detector.

4. (Canceled) ~~A frequency pulling reduction architecture implemented in an AM modulation process wherein spurious responses resulting from mixing products are eliminated, the architecture comprising:~~

~~a frequency transmitter scheme having a 3/2 frequency output;~~

~~a frequency synthesizer; and~~

~~said frequency output being developed from a VCO for both said transmitter and being non-harmonically related to a VCO frequency of said synthesizer.~~

5. (Canceled) ~~The architecture according to claim 4, wherein said transmitter scheme includes a frequency source and a frequency divider.~~

6. (Canceled) ~~The architecture according to claim 4, wherein said frequency synthesizer is coupled to a plurality of conditioned frequencies at the input side and a low pass filter at the output side.~~

7. (Canceled) ~~The architecture according to claim 4, wherein said 3/2 frequency output comprises conditioned frequencies from a frequency source and said VCO.~~

8. (Original) A method of reducing frequency pulling in an AM modulation process wherein spurious responses resulting from mixing devices are eliminated, the method comprising the steps of:

generating a VCO output frequency equal to a value obtained from a source frequency conditioned by a plurality of frequency dividers and phase detectors;

introducing said VCO output into a mixer;

adding ½ of said VCO output into said mixer via one of said frequency dividers;

introducing ½ of said VCO output into said synthesizer via one of said plurality of frequency dividers; and

producing a frequency output equal to 1.5 times greater than said VCO output frequency at an output amplifier.

9. (Original) The method according to claim 8, wherein said step of introducing ½ of said VCO output into said synthesizer includes the step of apportioning ½ of said VCO frequency using a ½ frequency divider to generate an output frequency equal to ½ the VCO frequency ($F_{VCO}$).

10. (Original) The method according to claim 9, wherein said step of apportioning includes the step of directing ½ of the $F_{VCO}$ into two opposite directions wherein one of the opposite directions feeds into a mixer.

11. (Original) The method according to claim 10, wherein said step of directing includes introducing ½ of the $F_{VCO}$ into a divider which ultimately feeds into the phase detector.

12. (Original) The method according to claim 8, wherein said step of producing a frequency output includes mixing output frequencies of $F_{VCO}$ and ½ $F_{VCO}$ in a mixer to generate a frequency output equal to 3/2 $F_{VCO}$.

13. (Previously Presented) A circuit architecture for eliminating frequency pulling of a voltage controlled oscillator, said architecture comprising:

an input signal,

one voltage controlled oscillator (VCO), wherein said input signal is electrically coupled to said VCO, and wherein said VCO produces a VCO output signal;

a mixer, wherein said mixer sums said VCO output signal with a second signal, wherein said second signal comprises the VCO output signal multiplied by a non-unity factor, and wherein said mixer produces a circuit output signal that is an amplified, non-unity, non-harmonic of said VCO output signal.

14. (Previously Presented) The architecture of claim 13, wherein said input signal is conditioned prior to input to said VCO.

15. (Previously Presented) The architecture of claim 14, wherein said input signal is conditioned through use of a frequency divider, a phase detector and a low pass filter.

16. (Previously Presented) The architecture of claim 13, further comprising a transmitter, wherein said transmitter transmits said circuit output signal.

17.-19. (Canceled)

20. (Previously Presented) A method for reducing frequency pulling of a voltage-controlled oscillator (VCO), comprising the steps of:

generating a VCO output frequency;

multiplying said VCO output frequency by a non-unity factor to produce a second output frequency;

mixing said VCO output frequency with said second output frequency; and

producing a frequency output comprised of the mixed signals that is an amplified, non-unity, non-harmonic of said VCO output frequency.

21. (Previously Presented) The method of claim 20, further comprising transmitting said frequency output.